

**Enfield
X-A000(527)
13185D**



Environmental Study/ Categorical Exclusion

May 2007

Table of Contents

Description of Project	1
Project Purpose and Need	1
Alternatives Considered.....	1
“No-Build”	1
Limited Pavement Overlay/Resurfacing.....	2
New Location Alternatives	2
Coordination and Public Participation	2
Evaluation of Environmental Effects	4
Resources/Issues	4
Safety/Transportation Patterns/Community Services	4
Air Quality	5
Noise	5
Contaminated Properties.....	5
Business Impacts.....	6
Easements/Tax Base	6
Land Use/Public Lands/Recreation.....	7
Utilities.....	8
Environmental Justice.....	8
Wetlands	8
Surface Waters/ Water Quality	9
Wildlife/ Endangered Species/ Natural Communities	9
Floodplains/ Floodways.....	10
Cultural Resources	10
Construction Impacts	11
Summary of Environmental Commitments	12

LIST OF EXHIBITS

- Exhibit A: Project location map
- Exhibit B: Aerial photograph of project area
- Exhibit C: Land conservation map
- Exhibit D: No Adverse Effect Memo
- Exhibit E: Initial Site Assessment (ISA)
- Exhibit F: Conservation Land Stewardship (CLS) Program correspondence
- Exhibit F1: Memorandum of Agreement
- Exhibit G: Land and Water Conservation Fund (LWCF) memo
- Exhibit H: Environmental justice memo
- Exhibit I: NH Natural Heritage Bureau (NHNHB) memo
- Exhibit J: United States Fish and Wildlife Service memo
- Exhibit K: Flood Insurance Rate Maps (FIRM)
- Exhibit L: NH Office of Energy and Planning memo
- Exhibit M: Town of Enfield correspondence
- Exhibit M1: Upper Valley Lake Sunapee Regional Planning Commission correspondence
- Exhibit N: Photographs of structures to be monitored for vibration
- Exhibit O: Photographs

Description of Project

This project involves the installation of 4-foot shoulders and the rehabilitation of NH Route 4A in Enfield, NH, beginning approximately 2,300 feet southeast of the NH Route 4A/Main Street intersection and proceeding southeast roughly 1.5 miles to the NH Route 4A/Cogswell Way intersection (*Exhibit A*). This project will also include pavement and bridge rehabilitation as well as updates and repairs to existing drainage structures. Improvements to this section of roadway and structure requires several permanent drainage and slope easements to be obtained prior to construction.

In accordance with the National Environmental Policy Act of 1969 (42 USC 4332(2)(c)) as implemented in 23 CFR 771.117(d)(1) this environmental study addresses the reconstruction of NH Route 4A and has been prepared using a systematic, interdisciplinary approach to assess the engineering considerations and environmental effects of this Categorical Exclusion project.

Project Purpose and Need

The proposed project is located on NH Route 4A beginning approximately 2,300 feet southeast of the NH Route 4A/Main Street intersection and proceeding southeast roughly 1.5 miles to the NH Route 4A/Cogswell Way intersection (*Exhibit A*). The intent of this project is to rehabilitate and update the existing roadway by increasing shoulder widths to 4 feet, resurfacing the roadway, repairing/updating drainage structures, bridges and ditches.

This section of roadway contains 11-foot travel lanes with 1 to 3-foot paved shoulders. The existing shoulder widths are too narrow for safe bicycle and pedestrian travel. The drainage ditches running along much of the length of the project are extremely steep and are located close to the existing edge of pavement. The lack of adequately paved shoulders and steep shoulder slopes force bicyclists to ride within the vehicle travel lanes and do not provide for safe emergency stopping and vehicle recovery. Many of the existing drainage structures including culverts, bridges and catch basins are showing signs of deterioration and will be repaired or replaced during this project.

Alternatives Considered

“No-Build”

The “No-Build” alternative is not considered feasible and prudent, as it does not address the deficiencies and safety concerns associated with the existing section of roadway. Selection of this alternative would require bicycles and pedestrians to continue to use the travel way and would allow for the continued deterioration of the existing roadway and drainage structures. Roadway conditions would continue to deteriorate and safety concerns would persist to a point where development of a future project would likely be necessary. Overall, the impacts associated with the proposed action are not of a magnitude to warrant selection of this alternative.

Limited Pavement Overlay/Resurfacing

This alternative would involve the limited resurfacing of this section of NH Route 4A. This alternative would address the deteriorating condition of the roadway surface, but would not involve the addition of wider shoulders or updates to existing drainage structures. Selection of this alternative would not address the safety issues associated with the narrow shoulders and would require bicyclists and pedestrians to continue to use the travel way. This alternative would allow the existing drainage structures to continue to deteriorate to the point where a new project would need to be developed.

New Location Alternatives

These alternatives would relocate the NH Route 4A roadway corridor either to the east or west of its current location. Both an east or west alignment would require constructing a new roadway within the Shaker Village Historic District. These realignments would potentially result in substantial effects to the Historic District including some structures listed on the National Register of Historic Places. In addition, both new location alternatives would have far greater impacts to undeveloped forestlands, wetlands, conservation properties and recreational facilities. Moreover, these alternatives would substantially increase project costs and the additional property and right-of-way impacts would likely raise serious public concerns.

Coordination and Public Participation

Letters were sent to various Federal, State and local agencies and groups, as well as the general public, requesting input on this project on the following dates:

<u>Agency / Organization</u>	<u>Contact</u>	<u>Date Sent</u>	<u>Date Received</u>
Town of Enfield			
Fire Chief,	David J. Crate	1/24/2007	-
Chief of Police	Richard A. Crate, Jr.	1/24/2007	-
Director of Public Works	Ken Daniels	1/24/2007	1/30/2007
Chairman, Recreation Commission	Carol Felix	1/24/2007	-
Chairman, Conservation Commission	Timothy D. Lenihan	1/24/2007	-
Town Manager	Steven P. Schneider	1/24/2007	-
Chairman, Board of Selectmen	Nancy Scovner	1/24/2007	-
Chairman, Heritage Commission	Meredith Smith	1/24/2007	-
Community Development Director	Jim Taylor	1/24/2007	-
Upper Valley Lake Sunapee RPC	Tara E. Bamford	1/24/2007	2/8/2007
US Fish and Wildlife Service	Bill Neidermyer	1/24/2007	2/23/2007
NH DRED, LWCF	Shari Colby	1/24/2007	1/30/2007
NH Natural Heritage Bureau	Melissa Coppola	1/24/2007	2/20/2007
NH Office of Energy and Planning	Jennifer Gilbert	1/24/2007	2/1/2007
NH Office of Energy & Planning (CLS)	Steve Walker	1/24/2007	1/26/2007
NH DOT – HR (Environmental Justice)	David Chandler	1/24/2007	2/21/2007

Meetings have periodically been held throughout the development of this project, with various Federal, State and local agencies, as well as with the general public. Project review meetings were held on the following dates:

<u>Date</u>	<u>Topic</u>
November 9, 1999	Public Officials Meeting
May 8, 2003	Cultural Resource Agency Meeting
August 1, 2003	Cultural Resource Agency Meeting
October 24, 2003	Cultural Resource Agency Meeting
March 22, 2005	Cultural Resource Agency Meeting
April 6, 2005	Cultural Resource Agency Meeting
April 20, 2005	Natural Resource Agency Meeting
April 25, 2005	Public Officials/ Public Informational Meeting
November 2, 2006	Cultural Resource Agency Meeting
November 9, 2006	Cultural Resource Agency Meeting
January 24, 2007	Natural Resource Agency Meeting

Evaluation of Environmental Effects

The effects of the project relative to the following social, economic, natural and cultural resources/issues have been reviewed. Resources/issues, which are not discussed in the body of the report, were investigated, however no impacts were evident. As such, these resources/issues are omitted from this environmental documentation. The resources and issues deemed applicable for this project are indicated in **bold/underlined** type.

Resources/Issues

<u>Social/ Economic</u>	<u>Natural</u>	<u>Cultural</u>
<u>Safety</u>	<u>Water Quality</u>	<u>Historical</u>
<u>Transportation Patterns</u>	<u>NPDES, Stormwater Mgt.</u>	<u>Archaeological</u>
<u>Air Quality</u>	<u>Wetlands</u>	Stonewalls
<u>Noise</u>	<u>Surface Water</u>	Aesthetics
Displacements	Groundwater	
<u>Contaminated Properties</u>	<u>Floodplains</u>	
Neighborhoods	<u>Wildlife</u>	
<u>Business Impacts</u>	Fisheries	
Land Acquisition	<u>Endangered Species</u>	
<u>Land Use</u>	<u>Natural Communities</u>	
<u>Tax Base</u>	Wild & Scenic Rivers	
<u>Recreation</u>	Stream Rechannelization	
<u>Public Lands</u>	NH Designated Rivers	
<u>Construction Impacts</u>	Forest Lands	
	Costal Zone	

Discussions of the effects on resources/issues in **bold** follow.

Safety/Transportation Patterns/Community Services

This project involves the installation of 4-foot shoulders and the rehabilitation of NH Route 4A in Enfield, NH, beginning approximately 2,300 feet southeast of the NH Route 4A/Main Street intersection and proceeding southeast roughly 1.5 miles to the NH Route 4A/Cogswell Way intersection.

The current speed limit of NH Route 4A within the project limit is posted at 40 mph. This section of roadway handles approximately 3,000 vehicles per day and serves as a connection between the City of Lebanon and points to the southeast including Springfield, Grafton and Wilmot. This rural section of roadway is also an important connection to the western side of Lake Mascoma for such community services as school busses, emergency response vehicles and town officials. This section of roadway is also listed as a statewide bicycle route and serves as an important recreational facility for local residents and visitors.

The intent of this project is to improve the condition of the roadway as well as to increase bicycle, pedestrian and vehicular safety. Upon completion of the project, traffic patterns are expected to be similar to those which exist today. It is anticipated that through traffic will be maintained throughout construction. It is not anticipated that these facilities will be negatively impacted during the construction of this project.

Air Quality

The proposed project is located within an area of the State that is in attainment with respect to the National Ambient Air Quality Standards (NAAQS) for ozone and all other criteria pollutants (CO, NO_x, VOCs, and PM₁₀). The proposed work is not considered a “Regionally Significant Project” as defined in the final Transportation Conformity rules (40 CFR 93.101) or in those rules adopted by the New Hampshire Department of Environmental Services in accordance with the interagency consultation provisions required by 40 CFR 93.105. When completed, the project is not expected to result in significant air quality impacts or contribute to violations of the NAAQS. Consequently, this project is exempt from the conformity requirements of the Clean Air Act Amendments of 1990.

Though exempt from the requirements of the Clean Air Act, the National Environmental Policy Act also requires consideration of the project's impact on air quality. The proposed improvements are intended to improve safety along the existing roadway and will be located on essentially the same alignment. When completed, the project will not appreciably alter pre-construction traffic patterns within the area. Traffic volumes are low and the conditions that contribute most significantly to the formation of elevated CO concentrations are not present. Therefore, as previously stated, the project is not expected to have an adverse impact on air quality.

Noise

Traffic through the project area is relatively light. Completion of this project will not cause a change in existing traffic noise. Construction activities will temporarily increase noise due to the use of heavy equipment, however these noise levels are expected to return to normal after the project has been completed.

Contaminated Properties

An in-house database search of the New Hampshire Department of Environmental Services (NHDES) One-Stop Environmental Site Information Guide indicated the presence of one (1) remediation site in close proximity to the project area (*Exhibit E*). This site has been listed by NHDES as “Closed” and therefore is considered to have been adequately addressed. Should any visual or olfactory indications of the presence of hazardous materials be encountered during construction, the Bureau of Environment should be contacted immediately and work in the immediate area discontinued until the situation is assessed (*Environmental Commitment 6*).

Business Impacts

There are several business and nonprofit organizations located within the project limits. It is not expected that upon completion, this project will negatively impact the operation of any of these businesses or nonprofit organizations. Temporary disruption of traffic into and out of these active businesses will be kept to a bare minimum as to allow continued operation of these facilities (*Environmental Commitment 5*).

Multiple additional businesses are located outside the project area in Enfield Village. As through traffic will be maintained or temporary detours with appropriate signage will be implemented throughout construction, it is not anticipated that these facilities will be negatively impacted during construction of this project (*Environmental Commitment 5*).

Easements/Tax Base

There are thirty-nine (39) properties located within the project area of which eight (8) will be impacted by this project. Construction of the proposed highway improvements will not require the acquisition of any property outside the existing right-of-way. This project will however require approximately 7,019 ft² (0.16 acres) of permanent easements and 43 ft² (0.001 acres) of temporary easements outside the limits of the existing right-of-way. The Department will obtain the necessary easements and rights of entry prior to the commencement of construction (*Environmental Commitment 4*). The subject temporary and permanent easements are mainly associated with slope reconfiguration stabilization, drainage improvements and temporary construction needs and therefore are not expected to adversely affect their associated properties.

Property Impacts Table

Parcel #	Owner(s)	Acquisition	Permanent Easement	Temporary Easement
		ft ²		
1*	Lasalette Novitiate	-	259	-
2*	North Village Lot owner Assoc.	-	86	-
8*	Lasalette Novitiate	-	43	
16*	Town of Enfield	-	3,983	43
29**	Gasparik, Joseph M., Cathy	-	1,399	
33	State of New Hampshire	-	861	
35	Pettengill, Catherine B.	-	388	

* Contributing Elements to the Enfield Shaker Village Historic District

** Potentially Eligible for the National Register of Historic Places

Land Use/Public Lands/Recreation

The subject section of NH Route 4A has been identified by local officials and the Upper Valley Lake Sunapee Regional Planning Commission as an important bicycle route for local residents and visitors. This section of roadway is also listed by the NH Department of Transportation's Bicycle and Pedestrian Section as a statewide bicycle route. The intent of this project is to improve bicycle and pedestrian safety along NH Route 4A by increasing the 1 to 3-foot existing shoulders to 4 feet throughout the length of the project. As a result this project is expected to have a positive effect on bicycle recreation throughout the region.

The Conservation Land Stewardship (CLS) Program is responsible for monitoring and protecting the conservation values of conservation easement lands in which the State of New Hampshire has invested. One such property (Parcel 15) has been identified within the project area. This 1,096 acre parcel known as the Lower Shaker Village Wildlife Management Area is held by NH Fish and Game (NHF&G) as a wildlife management area. In order to improve drainage on the subject property, NHDOT and NHF&G agreed that a culvert located beneath NH Route 4A should be replaced in conjunction with this project. As the inlet of this culvert is partially located on the southeastern side of the Parcel 15, NHDOT and NHF&G entered into a Memorandum of Agreement on April 19, 2007, allowing access onto the property in the area of the subject drainage structure (*Exhibit F1*). All impacts to Parcel 15 will be limited to those agreed upon in the April 19, 2007 Memorandum of Agreement between NHDOT and NHF&G (*Environmental Commitment 10*). The remainder of this project has been reviewed by the Office of Energy & Planning, CLS Program Coordinator and it was determined that there are no additional CLS parcels, local or state-held, in close proximity to the project area and that this project would not have an effect on the above noted parcel (*Exhibit F*).

Section 4(f) of the US Department of Transportation (US DOT) Act of 1966 (amended by 49 U.S.C. Section 303) provides protection for publicly owned parks and recreational areas that are open to the public and are considered substantial recreational facilities. One such property (Parcel 16) has been identified within the project area. This 15.3 acre parcel is known as the Shaker Recreation Park and is owned and operated by the Town of Enfield. This property contains several baseball and soccer fields which are available to the public. This project is expected to require two permanent drainage easements and one temporary construction easement to be obtained on this property. These easements will be located approximately at stations 154+15 Lt. and 156+40 Lt. and total approximately 3,983 square feet of permanent easements and 43 square feet of temporary easements. These easements are needed to update and properly maintain pre-existing drainage structures and are not expected to change the overall drainage of this property.

In a letter dated February 6, 2006 the Enfield Town Manager indicated that the Town of Enfield has jurisdiction over recreation in the town as well as the operation of the Shaker Recreation Park. This letter noted that the Town does not object to the proposed project and subsequent drainage easements as they will not adversely affect the activities, features, and attributes of the Shaker Recreation Park (*Exhibit M*). As such, in accordance with Section 6009(a) of the 2005 SAFETEA-LU transportation program reauthorization, this project is expected to receive a finding of *de minimis* impact on the Shaker Recreation Park and satisfy 4(f) requirements.

Section 6(f) is an article of the Federal Land and Water Conservation Fund (LWCF) Act of 1964, which provides financial assistance for the acquisition and development of public lands to create parks and open spaces; protect wilderness, wetlands and refuges; preserve wildlife habitat; and enhance recreational opportunities. Any land acquired or improved with these funds is subject to a body of federal regulations under the purview of the US Department of the Interior (USDOI). Pursuant to these regulations, any land subject to Section 6(f) cannot be “converted” to another use for purposes inconsistent with the Act without the approval of the USDOI and without being replaced with other land that is of equal use and value to the land proposed for conversion. Based upon a review of their LWCF files, the NH Department of Resources and Economic Development (DRED) has advised that there are no Section 6(f) parcels in the project area (*Exhibit G*).

Utilities

The proposed project requires the relocation of aerial utility lines and power poles. Disruption to service, if any, will be kept to an absolute minimum. The following utility companies have been identified within the project area:

<u>SERVICE</u>	<u>LOCATION</u>
National Grid (Electric)	Aerial
Verizon (Telephone)	Aerial
Comcast (Cable TV)	Aerial
Enfield Public Works Department (Potable Water)	Underground
Enfield Public Works Department (Sewer)	Underground

Environmental Justice

Executive Order 12898, enacted in 1994, requires that an environmental justice evaluation be conducted for all transportation projects that are undertaken, funded or approved by the Federal Highway Administration to avoid, minimize, or mitigate disproportionately high and adverse human health, environmental, social and economic effects on minority populations and low income populations. The environmental justice review for the impacted area did not indicate the presence of any of the above noted populations of concern (*Exhibit H*). As such, this project complies with Executive Order 12898.

Wetlands

Work associated with this project involves dredge and fill activities within the jurisdiction of the New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau and the Army Corps of Engineers (ACOE). Impacts consist of 4,370 ft² of permanent impacts to wetlands. The

proposed project will incur impacts to the following wetland types as classified by the United States Fish and Wildlife Service:

1. PFO1E: Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded/Saturated
2. R4SB4x: Riverine, Intermittent, Streambed, Sand, Excavated

A Dredge and Fill application was submitted to the NHDES Wetlands Bureau for this project on November 15, 2005 and amended on January 18, 2007. The proposed impacts meet the criteria established for a "Minor" Impact Wetlands and Non-Site Specific Permit administered by the NHDES Wetlands Bureau. The project was reviewed by the ACOE, New Hampshire Fish and Game (NHF&G), US Fish and Wildlife Service (USF&WS), US Environmental Protection Agency (EPA), NH Office of Energy and Planning (NHOEP), and the Federal Highway Administration (FHWA) at the April 20, 2005 and January 24, 2007 Natural Resource Agency coordination meetings. None of the above listed agencies objected to the proposed project. It is anticipated that the project will qualify for a State Programmatic General Permit administered by the ACOE. A Wetlands and Non-Site Specific Permit will be obtained prior to construction within any areas under the jurisdiction of the NHDES Wetlands Bureau and the ACOE (*Environmental Commitment 9*).

Surface Waters/ Water Quality

The project is located in close proximity to Mascoma Lake. The New Hampshire Lakes Management and Protection Program (LMPP) was established in 1990 with the passage of RSA 483-A to protect the lakes of New Hampshire for their outstanding natural and cultural resources. The program is administered by NHDES. Although this project does not directly impact Lake Mascoma, the entire length of the project is located within ¼ mile of the lake. The Department has been coordinating this effort with NHDES and NHF&G to ensure that the project not only meets transportation needs, but is also sensitive to the aquatic ecosystem.

To minimize the potential for erosion and sedimentation increases in Lake Mascoma and other downstream wetland systems during construction, the contractor responsible for the work will be required, as a contract provision, to prepare a Stormwater Pollution Prevention Plan detailing the pollution prevention measures which will be employed prior to the commencement of construction activities (*Environmental Commitments 1 and 2*).

Wildlife/ Endangered Species/ Natural Communities

The proposed action has been reviewed by the USF&WS and the NH Natural Heritage Bureau (NHNHB) for the presence of federal or state, listed or proposed, threatened or endangered species, or other species of special or exemplary status. In a letter dated February 23, 2007, the USF&WS responded that based on currently available information, no species or habitats under the jurisdiction of the USF&WS were identified within the project area (*Exhibit J*). In a letter dated February 20, 2007, the NHNHB responded that there was an occurrence of a Common Loon (*Gavia immer*) on the eastern side of Lake Mascoma (*Exhibit I*). Given the limited scope of work for this resurfacing and minor shoulder widening project it is not expected that this effort will have an effect on this state

threatened species. This project was reviewed by NHF&G at the April 20, 2005 and January 24, 2007 Natural Resource Agency coordination meetings and no objections to this project in regards to this threatened species were raised.

Floodplains/ Floodways

A review of the National Flood Insurance Rate Map (FIRM) for the Town of Enfield, NH (Community Number 33019C) indicates that the project is partially located within the area of the 100-year flood with base flood elevations determined (Zone AE) (*Exhibit K*). This project is intended to update the existing roadway by resurfacing, updating existing drainage structures and increasing shoulder widths to a maximum of 4 feet. Upon completion of this project flood storage and water conveyance within the 100-year flood zone are expected to be similar to or better than the conditions that existed prior to construction.

The Department has coordinated with the New Hampshire Office of Energy and Planning (NHOEP) and the Town of Enfield, NH. The Enfield Fire Chief and Director of Public Works were notified of the proposed project on January 24, 2007 and did not object to the proposed project.

Cultural Resources

The Department has conducted architectural history and archaeological surveys and consulted with the State Historic Preservation Officer (SHPO), the NH Division of Historical Resources (NHDHR) and the Federal Highway Administration (FHWA) to locate and identify National Register of Historic Places listed, or eligible, properties or districts within the immediate area of the proposed project. The proposed project has been reviewed by the SHPO and FHWA based on the Section 106 review process set forth by the National Historic Preservation Act of 1966, as amended, and the Advisory Council on Historic Preservation's *Procedures for the Protection of Historic Properties* (36 CFR 800). The proposed design was presented at Monthly Cultural Resource Agency Meetings held on May 8, 2003, August 1, 2003, October 24, 2003, March 22, 2005, April 6, 2005, November 2, 2006 and November 9, 2006.

Following completion of a review of the architectural and/or historical resources present in the area, it was determined that the northern 4,300-foot section of the project area is located within the Enfield Shaker Village Historic District which is listed on the National Register of Historic Places. The Enfield Shaker Village was founded in 1793 and was home to three "families" of Shakers who occupied the village until 1923. In 1927 the village was purchased by the LaSallettes, an order of Catholic priests. The LaSallettes maintained the village until 1985 when the remaining shaker buildings and grounds transferred ownership again and the non-profit Shaker Museum was established. The LaSallettes still own several properties on the western side of NH Route 4A which are included within the Historic District. A detailed description of the District is on file at the NHDHR office in Concord, NH.

Review of the project area indicated the presence of multiple structures located within the Enfield Shaker Village Historic District on parcels 1, 7, 8, 11, 12, 13 and 29 that are of particular

importance to the District. Photos of the particular structures of concern can be found in *Exhibit N*. It is not expected that these structures will be adversely effected by this project. It was agreed however, that vibration monitoring would be conducted as necessary on the structures in order to ensure that the structural integrity of these buildings would not be compromised throughout construction (*Environmental Commitment 7*).

Phase 1A and 1B archaeological investigations associated with Shaker Village remains were performed for this project. Four locations were tested, stations 148, 150+20, 152, 161+00 and 161+70. Testing at the first three stations found that these locations lack archaeological integrity. The fourth site, station 161+70 was found to have some integrity and therefore would need to be monitored during construction. Several other sites located at stations 152+00 Rt. (northwest quadrant of the bridge), 161+10 Lt., 161+60 Lt and 164+25 Lt., were identified from a literature review as potentially containing remains to former Shaker Village structures. These sites will also need to be monitored during construction. Should any artifacts or building remains be observed during construction, the contractor may be required to suspend operations in the area until the situation is assessed and resolved (*Environmental Commitment 8*). It was agreed by NHDHR and NHDOT that monitoring of construction in this area would be conducted by the NHDOT Cultural Resource Manager.

At the November 9, 2006, Cultural Resource Agency Meeting it was agreed by NHDHR and FHWA that, given that the majority of the work associated with this project would be located within the existing right-of-way, this project will not have an Adverse Effect on the Enfield Shaker Village Historic District. Furthermore, it was agreed by all parties that this project would not have a substantial impact on Section 4(f) resources and therefore would qualify for a *de minimis* impact finding in accordance with Section 6009(a) of the 2005 SAFETEA-LU transportation program reauthorization (*Exhibit D*).

Construction Impacts

Construction of this project is anticipated to cause temporary increases in noise and dust levels within the project area. All standard measures will be employed to ensure such increases are minimized to the extent practicable and limited to the construction period (*Environmental Commitment 3*).

It is anticipated that the construction of this project will temporarily disrupt traffic patterns. Access to all occupied residences will be maintained throughout construction. Although traffic might need to run on gravel surfaces for short periods of time, through traffic will be maintained whenever possible or short-term temporary detours with appropriate signage will be implemented during construction (*Environmental Commitment 5*).

To minimize the potential for erosion and sedimentation increases in Mascoma Lake and other downstream wetland systems during construction, the contractor responsible for the work will be required, as a contract provision, to prepare a Stormwater Pollution Prevention Plan detailing the pollution prevention measures which will be employed prior to the commencement of construction activities (*Environmental Commitments 1 and 2*).

Summary of Environmental Commitments

The following environmental commitments have been made for this project.

1. Prior to the commencement of work, the contractor shall submit a Stormwater Pollution Prevention Plan specific to this project. The plan shall be approved by the Department and implemented and monitored as noted. **(Construction & Environment)**
2. Standard pollution prevention measures will be employed to assure all negative impacts are avoided and/or minimized to the maximum extent practicable. **(Construction)**
3. Precautions shall be employed to minimize noise and dust levels during the construction period, primarily for the abutting receptors located adjacent to the project area. **(Construction)**
4. The Department will obtain the necessary easements and rights-of-entry prior to the commencement of construction. **(Design & Right-of-Way)**
5. Although traffic might need to run on gravel surfaces for short periods of time, through traffic will be maintained whenever possible or short-term temporary detours with appropriate signage will be implemented during construction. Access to all occupied properties shall be maintained throughout construction. **(Design & Construction)**
6. One NHDES hazardous waste remediation site has been identified in close proximity of the project area. Should any visual or olfactory indications of the presence of hazardous materials be encountered, the Bureau of Environment should be contacted immediately and construction in the immediate area discontinued until the situation is assessed and resolved. **(Construction & Environment)**
7. Vibration monitoring will be conducted as necessary on the historic structures found on parcels 1, 7, 8, 11, 12, 13 and 29.
8. The Department's Cultural Resource Manager will be notified ten (10) work days prior to any excavation or similarly disruptive activity in the vicinity of stations 152+00 Rt. (northwest quadrant of the bridge), 161+10 Lt., 161+60 Lt and 164+25 Lt. These locations have been identified as archaeologically sensitive and should any artifacts or building remains be observed during construction, the monitor may require the contractor to suspend operations in the area until the situation is assessed and resolved. **(Construction, Design & Environment)**
9. A Wetlands and Non-Site Specific Permit will be obtained prior to construction within any areas under the jurisdiction of the NHDES Wetlands Bureau and the ACOE. **(Construction & Environment)**

10. All impacts to Parcel 15 will be limited to those agreed upon in the April 19, 2007 Memorandum of Agreement between NHDOT and NHF&G (*Environmental Commitment 10*). (**Construction & Design**)